did, however, arrest infection that had already gained headway, and led to full recovery. Such a mixture is valuable not only for meningitis but also for other pneumococcic infections such as those of the joints or the serous cavities.

The Detection of Anthrax Spores in Industrial Material.—Glynn and Lewis (*Jour. of Hygiene*, June, 1912) publish the results of their work, in Liverpool, upon industrial material suspected of harboring anthrax. They were successful in more than 20 per cent. of the samples in a large series, and further they were successful in finding spores in samples disinfected by the methods now in vogue, which indicate that these methods are as yet imperfect. Glynn and Lewis consider it practically impossible to completely sterilize certain industrial materials without damaging them, but they consider that the present imperfect method is much better than none at all. In the last five year period, the British Islands show 366 human cases of which 81 were fatal, with a steady increase in the number of cases developing in the agricultural community, due to the moderate but steady increase of the disease among domestic animals in the same period. The materials usually submitted for investigation are hides, wool, hair, and bones, and importations from the Malay States gave Glynn and Lewis most of their successful results. The methods usually employed in the detection of the spores are agar plate cultures or the inoculation of guinea-pigs, of which the latter is favored.. Inoculations should be made in duplicate with the centrifuged deposit of watery extract, and it is a disadvantage at present insurmountable that a considerable number of animals die from the effects of pathogenic anaërobes.

Pseudoleukemia.—At the latest meeting of the German Pathological Association, a conference was devoted to so-called pseudoleukemia (*Verhandl. d. deutsch. path. Gesellsch.*, 1912), better known in our literature as Hodgkin's disease. Fraenkel, of Hamburg, referred to the original conception of Cohnheim, and showed that in these cases there was anemia, and a relative lymphocytosis, which lymphocytosis may pass over into a definite leukemic state, and that this happens oftener than is thought. In fact, Fraenkel says, in the few cases he has sectioned, he found a true leukemic state; this he thinks may have arisen but a few days or even hours before death, in that the organs were deprived of the ability to hold back the white cells, which then came into the circulation and gave the picture of leukemia. Although the changes in pseudoleukemia are usually observable in peripheral groups of nodes, yet internal groups can also be discovered to show microscopic changes. The enlargement of the spleen, similar to that seen in leukemia, is notable, and when this is very great, Fraenkel thinks it is hardly right to call the disease pseudoleukemia, since even in cases without splenic enlargement the increasing lymphocytes can be seen in the follicles. In the definition of the disease one has to admit the impossibility of making a classification according to the groups of nodes involved, as practically any group may be affected. Further, there may be the appearance of localized masses in the liver, kidney, lung, bowel, and elsewhere, and even in the skin as lymphodermia cutis. All this is not in any sense metastatic extension. Pseudoleukemia is a systemic disease of the lymphatic tissue of the entire organism; variation of intensity and of site produce the varying pictures. Fraenkel rules out the cases of Mikulicz, who described symmetrical swelling of lachrymal and salivary glands as an early stage of pseudoleukemia; rather are these to be considered as an atypical tuberculosis. Similarly, he would rule out infantile status lymphaticus. To distinguish lymphosarcoma, however, is quite another matter; in fact, Fraenkel takes the stand of Virchow that lymphosarcoma and pseudoleukemia stand very close to one another. Chloroma, Fraenkel would designate as lymphatic chloroleukemia, or if the blood remains aleukemic, hyperplastic chloropseudoleukemia; not in any sense does he consider it as a true neoplastic state. Myeloma he would class as a medullary localization of pseudoleukemia; myeloma has thus no actual identity with true tumor formation. There must therefore be two forms of pseudoleukemia, the ordinarily observed lymphoid forms and the much rarer myeloid forms—a generalized, intra- and extra-medullary hyperplasia of myeloid tissue, connected with an unchanged, or not definitely leukemic blood state. Fraenkel is unwilling to admit a splenic form of myeloid pseudoleukemia. **Sternberg**, of Brünn, stated at the outset, that Hodgkin's cases were of so variable a nature that we have there no secure basis for a definition of pseudoleukemia. Having dealt with a large number of diseases which have little connection with true pseudoleukemia, he comes to the question of lymphosarcoma in Kundrat's sense of the word, which he considers must be admitted to have some connection with pseudoleukemia; at least, that form of it known as hyperplastic lymphoma is to be differentiated from true sarcoma, and both it and pseudoleukemia possess in common an alteration of the general body constitution. The frequently observed generalized lymphoid hyperplasia existing in tuberculous infections, although similar to the picture of pseudoleukemia, Sternberg characterizes as a purely tuberculous phenomenon. He counts that pseudoleukemia should not be considered in any way as an early stage of lympholeukemia, or of lymphosarcomatosis, but nevertheless feels that actually it is the same process as exists in lymphatic leukemia, and it is to be distinguished from the same only if the escape of the lymphocytes into the blood stream is restrained. Sternberg would thus admit an acute generalized pseudoleukemia, and a localized pseudoleukemia, which again may be splenic or medullary, and this last not in the unlimited sense which sould include Banti's disease, but merely in the restricted sense of Cohnheim and Wunderlich. In short, Sternberg groups into pseudoleukemia, lymphosarcomatosis (with the restriction that the metastases must be in the lymphoid tissue), lymphogranulomas, the multiple plasmomas, and the splenomegalies, in all of which there is a more or less universal hyperplasia of the lymphoid tissue without leukemic signs in the blood. In discussion **Benda** considered that fuller clinical examination would prove that the cases of so-called pseudoleukemia in which at autopsy the blood shows leukemic signs had been insufficiently examined clinically, and he quoted a case in which diagnosis of Banti's disease had led to extirpation of the spleen and subsequent death, because the recessions of the leukemic state had not been recognized. **Hirschfeld** considers that lymphogranulomatosis would be a preferable term to pseudoleukemia. In further discussion Aschoff thought that the term pseudoleukemia should be left to clinicians, and the pathologists should use the term aleukemic or proleukemic lymphadenia or lymphadenosis. If we were to sum up the prevailing views of the members of the Association upon the causation of hyperplasia of the lymphoid tissues, it seems to be that a certain number of the cases are definitely due to tubercle bacilli; that in a fair number of other cases Much's granules have been discoved, which may be considered as evidence of the presence of tubercle bacilli of some variety, probably of reduced virulence; that even where tubercle bacilli and Much's granules have not been found there may yet be some cases caused by the virus of tuberculosis. Definite evidence is now at hand that in cases where Much's granules have been found and injection made, the animals so subjected have succumbed to a low grade tuberculosis. With regard to the terminology, Aschoff's suggestion of lymphadenosis seems a very good one, and it is possible to modify such a term with the adjective aleukemic or leukemic, according to the accompanying circumstances.

Diurnal Filaria.—Through the daily press comes the information that the metamorphosis of Filaria loa has been discovered to occur in the salivary glands of a fly belonging to the genus Chrysops. The information comes by cablegram from DR. R. P. LEIPER, who is at Calabar, and this mode of transmission of news suggests the fear of supersession which has invaded even laboratories. Filaria loa is confined to the west coast of Africa, and its embryos are found in the blood only during the day-time, in contradistinction to those of Filaria bancrofti, which are found only during the night. Not a fatal disease, the infection by Filaria loa is common in West Africa, its best known manifestation being the so-called "Calabar swelling" which is due to the presence of the worm in the muscles and in the vicinity of the tendons, where painful swellings are set up which may interfere seriously with the function of the limb concerned. In connection with the habits of the embryos of Filaria loa it is interesting to note that the insect concerned is one which bites by day, suggesting a parallel with the mosquito, which is responsible for the transmission of Filaria bancrofti, and which bites at night.

The attention of subscribers is called to the fact that the article entitled "Tuberculin Therapy in Surgical Tuberculosis," by Thomas Wood Hastings, M.D., which appeared in the issues of this Journal for August and September, 1912, was a Mütter Lecture delivered before the College of Physicians of Philadelphia on December 9, 1910.

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